

We claim:

1. An apparatus to form panels from moldable material comprising:
  - a) a material storage and feeding container for placing moldable material on a first sheet of peel ply material atop a conveyor;
  - b) said conveyor having a roughened surface for creating friction between the first sheet of peel ply material thereon and said conveyor, said conveyor passing over a base plate having one distal end placed so that said conveyor passes under said material storage and feeding container and a second distal end adjacent where said conveyor departs the first sheet of peel ply material;
  - c) a sizing plate under which a second sheet of peel ply material passes, said sizing plate configured to regulate the thickness of the moldable material as it exits said material storage and feeding container, said sizing plate being positioned to place the second sheet of peel ply material over the moldable material to form a web having a bottom side and a top side, the bottom side of the web formed by the first sheet of peel ply material and the top side formed by the second sheet of peel ply material;
  - d) a compression zone having a plurality of sides and at least one compression plate positioned to further compress the moldable material;
  - e) a friction reducing material lining said compression plate and a plurality of sides of said compression zone; and
  - f) a receiving device for receiving the web from said conveyor.
2. The apparatus of Claim 1 wherein said material storage and feeding container further comprises a grid for dispensing and leveling the moldable material on the first sheet of peel ply material that is fed onto said conveyor.
3. The apparatus of Claim 2 wherein said grid is adjustable to regulate the thickness of the discharge of moldable material from said material storage and feeding container.
4. The apparatus of Claim 1 wherein said sizing plate is configured to prevent breaks and voids in the moldable material.

5. The apparatus of Claim 4 wherein said sizing plate is angled above said conveyor with its top toward said material storage and feeding container to prevent excess moldable material leaving said material storage and feeding container.
6. The apparatus of Claim 5 wherein the angle of said sizing plate is acute and is about 45 degrees above said conveyor with the acute angle opening toward said material storage and feeding container.
7. The apparatus of Claim 1 wherein a constant thickness area is adjacent said compression zone and receives the web from said compression zone, said constant thickness area formed by at least one stabilizing plate and a plurality of sides.
8. The apparatus of Claim 7 wherein said stabilizing plate and sides of said constant thickness area are lined with friction reducing material, said constant thickness area stabilizing the web in size.
9. The apparatus of Claim 8 wherein said friction reducing material lining said constant thickness area is polytetrafluoroethylene.
10. The apparatus of Claim 1 wherein said roughened surface of said conveyor securely grips the first sheet of peel ply material.
11. The apparatus of Claim 10 wherein said conveyor is a sanding belt.
12. The apparatus of Claim 10 wherein the first sheet of peel ply material is chosen to prevent breaking of and voids in the moldable material deposited on said first sheet of peel ply material.
13. The apparatus of Claim 12 wherein the first sheet of peel ply material forming the bottom side of the web is made of a different substance from the second sheet of peel ply material forming the top side of the web.
14. The apparatus of Claim 12 wherein the first sheet of peel ply material forming the

bottom side of the web is made of the same material as the second sheet of peel ply material forming the top side of the web.

15. The apparatus of Claim 12 wherein the peel ply material is woven nylon.
16. The apparatus of Claim 1 wherein said friction reducing material lining said compression zone is polytetrafluoroethylene.
17. The apparatus of Claim 1 wherein said apparatus can be stopped at selected times to allow removal of the processed portion of the web.
18. The apparatus of Claim 17 wherein said apparatus is stopped and at least a portion of the web is removed for further processing in molds.
19. The apparatus of Claim 1 wherein the moldable material is cured by the application of heat while in a forming mold.
20. The apparatus of Claim 1 wherein said receiving device is a device for molding the moldable material and the moldable material is dispensed directly into said device for molding.
21. The apparatus of Claim 1 further comprising a heated zone for curing said moldable material.
22. The apparatus of Claim 21 wherein said heated zone is integral with said constant thickness area.
23. The apparatus of Claim 1 wherein said receiving device is a shaped track for forming and shaping the moldable material.
24. The apparatus of Claim 23 further comprising a heating zone to cure the moldable material.

25. The apparatus of Claim 23 wherein said shaped track is integral with a constant thickness area adjacent said compression zone receiving the web from said compression zone, said constant thickness area formed by at least one stabilizing plate and a plurality of sides.
26. The apparatus of Claim 1 wherein the moldable material is used to form protective and sound suppression panels in aircraft engines.
27. The apparatus of Claim 1 wherein the first sheet of peel ply material is used as a molding release agent in preparing a mold surface.
28. The apparatus of Claim 1 wherein the second sheet of peel ply material is used as a molding release agent in preparing a mold surface.
29. An apparatus to form liners for aircraft engines from moldable material comprising:
  - a) a material storage and feeding container comprising an adjustable grid for placing and sizing moldable material on a first sheet of peel ply material atop a conveyor;
  - b) said grid being adjustable to regulate the thickness of the dispensed moldable material;
  - c) said conveyor having a roughened surface for gripping the first sheet of peel ply material thereon, said conveyor passing over a base plate having one distal end placed so that said material storage and feeding container can dispense moldable material on said conveyor and a second distal end adjacent where said conveyor departs the first sheet of peel ply material;
  - d) a sizing plate under which the second sheet of peel ply material passes, said sizing plate configured to regulate the thickness of the moldable material as it exits said material storage and feeding container, said sizing plate being positioned to place the second sheet of peel ply material over the moldable material to form a web having a bottom side and a top side, the bottom side of the web formed by the first sheet of peel ply material covered by the dispensed moldable material and the top side formed by the second sheet of peel ply material covering the moldable material, said sizing plate configured to prevent breaks and voids in the moldable material, said sizing plate being positioned to prevent excess moldable material

- leaving said material holding and feeding container;
  - e) a compression zone having a plurality of sides and at least one compression plate positioned to further compress the moldable material;
  - f) a friction reducing material lining said compression plate and a plurality of sides of said compression zone to reduce friction forces between the top side of the web, the sides of the web and the corresponding inner surfaces of said compression zone; and
  - g) a receiving device for receiving the web from said conveyor.
30. The apparatus of Claim 29 wherein a constant thickness area is adjacent said compression zone and receives the web from said compression zone, said constant thickness area formed by at least one stabilizing plate and a plurality of sides.
31. The apparatus of Claim 30 wherein said constant thickness area is lined with friction reducing material.
32. A method for making panels from moldable material comprising:
- a) dispensing and leveling a moldable material on a first sheet of peel ply material placed on a conveyor;
  - b) providing a roughened surface on the conveyor to create gripping action between the conveyor and the first sheet of peel ply material;
  - c) providing a sizing plate and configuring the sizing plate to further level the moldable material and place a second sheet of peel ply material on top of the moldable material to form a web;
  - d) moving the web with the conveyor;
  - e) providing a compression zone to compress the moldable material of the web into a given shape and size; and
  - f) removing the web from the conveyor.
33. The method of Claim 32 comprising providing a constant thickness area to stabilize the web in size, the constant thickness area being adjacent the compression zone and receiving the web from the compression zone, the constant thickness area being lined with friction reducing material.

34. A method for making sound insulating and protective liners for aircraft engines comprising:
- a) feeding a first sheet of peel ply material onto a conveyor and dispensing and leveling a moldable material on top of the peel ply material;
  - b) providing a roughened surface on the conveyor to create a gripping action between the conveyor and the first sheet of peel ply material;
  - c) providing a sizing plate and configuring the sizing plate to further level the web and prevent voids and cracks in the moldable material, configuring the sizing plate and second sheet of peel ply material to place the second sheet of peel ply material on top of the moldable material to form a web having a bottom side and a top side, the bottom side of the web formed by the first sheet of peel ply material covered by the dispensed moldable material and the top side formed by the second sheet of peel ply material covering the moldable material, and configuring the sizing plate to prevent excess moldable material leaving the material storage and feeding container;
  - d) moving the web with the conveyor;
  - e) providing a compression zone to compress the moldable material of the web into a given shape and size, and lining the compression zone with friction reducing material; and
  - f) removing the web from said conveyor.
35. The method of Claim 34 comprising providing a constant thickness area to stabilize the web in size, the constant thickness area being adjacent the compression zone and receiving the web from the compression zone, the constant thickness area being lined with friction reducing material.